CERTIFICATE OF INSTALLATION		NRCI-LTI-05-E
Power Adjustment Factors		(Page 1 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

GENERAL INFORMATION				
DATE OF BUILDING PERMIT	PERMIT #			
BUILDING TYPE	☐ Nonresidential	☐ High-Rise Res (Common Area)	☐ Hotel/Motel (Common Area)	
PHASE OF CONSTRUCTION	☐ New Construction	☐ Addition	☐ Alteration	☐ Unconditioned

SCOPE OF RESPONSIBILITY	
Enter the date of approval by enforcement agency of the Certificate of Compliance that provides the specifications for the energy efficiency measures for the scope of responsibility for this Installation Certificate:	Date:

Power Adjustment Factor (PAF)
§130.4(b) - Before a Power Adjustment Factor will be allowed for compliance with Section 140.6 of Part 6 of Title 24, the person who is eligible under Division 3 of the Business and Professions Code to accept responsibility for the construction or installation of features, materials, components, or manufactured devices shall sign and submit this Installation Certificate.

§140.6(a) 2 - Reduction of wattage through controls. In calculating actual indoor Lighting Power Density, the installed watts of a luminaire providing general lighting in an area listed in TABLE 140.6-A may be reduced by the product of (i) the number of watts controlled as described in TABLE 140.6-A, times (ii) the applicable Power Adjustment Factor (PAF), if all of the conditions [in this Certificate of Installation are met]:

If any of the requirements in this Installation Certificate fail, the installation shall not be eligible for using the PAF.

Check all that apply:

PART 1 Certificate Of Compliance Correctly Filled Out

☐ In addition to this Certificate of Installation, the PAF has been correctly document on page 2 of NRCC-LTI-02—E of the Certificate of Compliance submitted to the building department.

PART 2 Type of PAF

☐ **A. This installation qualifies for the following PAFs:**

☐ 1. This installation qualifies for the PAF for a Partial-ON Occupant Sensing Control in TABLE 140.6-A because it meets all of the following requirements:

- ☐ a. The Partial-ON Occupant Sensing Control is use in only the following space types:
  - ☐ i, An area ≤ 250 square feet enclosed by floor-to-ceiling partitions
  - ☐ ii. A classroom of any size
  - ☐ iii. A conference room of any size
  - ☐ iv. A waiting room of any size
- ☐ b. The PAF used is 0.20
- ☐ c. The control automatically deactivates all of the lighting power in the area within 30 minutes after the room has been vacated; and
- ☐ d. The first stage automatically activates between 30-70 percent of the lighting power in the area
- ☐ e. The lighting control is a:
  - ☐ i. Switching system, or

CERTIFICATE OF INSTALLATION		NRCI-LTI-05-E
Power Adjustment Factors		(Page 2 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

- ☐ ii. Dimming system; and
- ☐ f. The second stage manually activates the alternate set of lights; and
- ☐ g. This manual-ON function is not capable of conversion from manual-ON to automatic-ON functionality via manual switches or dip switches; and
- ☐ h. Switches are located in accordance with Section 130.1(a)
- ☐ i. Occupants can manually do all of the following regardless of the sensor status:
  - ☐ Activate the alternate set of lights; and
  - ☐ Activate 100 percent of the lighting power; and
  - ☐ Deactivate all of the lights.

☐ 2. This installation qualifies for the PAF for an occupant sensing control controlling the general lighting in large open plan office areas above workstations, in accordance with TABLE 140.6-A, because the following requirements have been met:

- ☐ a. The occupant sensing controls are in large open plan offices that are greater than 250 square feet and:
  - ☐ i. One sensor is controlling an area that is no larger than 125 square feet, and the PAF used in 0.40
  - ☐ ii. One sensor is controlling an area that is from 126 to 250 square feet, and the PAF used in 0.30
  - ☐ iii. One sensor is controlling an area that is from 251 to 500 square feet, and the PAF used in 0.20
- ☐ b. This PAF is only being applied only to office areas which contain workstations; and
- ☐ c. Controlled luminaires are only those which provide general lighting directly above the controlled area, or furniture mounted luminaires that comply with Section 140.6(a)2 and provide general lighting directly above the controlled area; and

- ☐ d. Qualifying luminaires have been controlled by occupant sensing controls that meet all of the following requirements, as applicable:
  - ☐ i. Infra-red sensors have been equipped by the manufacturer, or fitted in the field by the installer, with lenses or shrouds to prevent them from being triggered by movement outside of the controlled area.
  - ☐ ii. Ultrasonic sensors have been tuned to reduce their sensitivity to prevent them from being triggered by movements outside of the controlled area.
  - ☐ iii. All other sensors have been installed and adjusted as necessary to prevent them from being triggered by movements outside of the controlled area.

☐ 3. This installation qualifies for the PAF for a Manual Dimming System or a Multiscene Programmable Dimming System in TABLE 140.6-A because:

- ☐ a. The lighting is controlled with a control that can be manually operated by the user; and
- ☐ b. The space is only of the following type:
  - ☐ i. Hotel/motel
  - ☐ ii. Restaurant
  - ☐ iii. Auditorium
  - ☐ iv. Theater
- ☐ C. The type of control and PAF used is one of the following:
  - ☐ i. A Dimming System with manual dimming and the PAF used is 0.10

CERTIFICATE OF INSTALLATION		NRCI-LTI-05-E
Power Adjustment Factors		(Page 3 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

- ☐ ii. A Multiscene Programmable control and the PAF used is 0.20

☐ 4. This installation qualifies for the PAF for a Demand Responsive Control in TABLE 140.6-A, because the installation meets all of the following requirements:

- ☐ i. The building is 10,000 square feet or smaller; and
- ☐ ii. The PAF used is 0.05. Note that luminaires that qualify for other PAFs may also qualify for this demand responsive control PAF.
- ☐ iii. The controlled lighting is capable of being automatically reduced in response to a demand response signal; and
- ☐ iv. Lighting has been reduced in a manner consistent with uniform level of illumination requirements in TABLE 130.1-A; and
- ☐ v. Spaces that are non-habitable have not been used to comply with this requirement, and
- ☐ v. Spaces with a lighting power density of less than 0.5 watts per square foot have not been counted toward the building's total lighting power.

☐ 5. This installation qualifies for the PAF for Combined Manual Dimming plus Partial-ON Occupant Sensing Control in TABLE 140.6-A because the installation meets all of the following requirements:

- ☐ a. The Combined Control is use in only the following space types:
  - ☐ i, An area ≤ 250 square feet enclosed by floor-to-ceiling partitions
  - ☐ ii. A classroom of any size
  - ☐ iii. A conference room of any size
  - ☐ iv. A waiting room of any size
- ☐ b. The lighting is controlled with a control that can be manually operated by the user; and
- ☐ c. The dimming component is one of the following:
  - ☐ i. A Dimming System with manual dimming; or
  - ☐ ii. A Multiscene Programmable control
- ☐ d. The Partial-ON Occupant Sensing component automatically deactivates all of the lighting power in the area within 30 minutes after the room has been vacated; and
  - ☐ i. The first stage automatically activates between 30-70 percent of the lighting power in the area
  - ☐ ii. The lighting control is a:
    - ☐ Switching system, or
    - ☐ Dimming system; and
  - ☐ iii. The second stage manually activates the alternate set of lights; and
  - ☐ iv. This manual-ON function is not capable of conversion from manual-ON to automatic-ON functionality via manual switches or dip switches; and
  - ☐ v. Switches are located in accordance with Section 130.1(a)
  - ☐ vi. Occupants can manually do all of the following regardless of the sensor status:
    - ☐ Activate the alternate set of lights; and
    - ☐ Activate 100 percent of the lighting power; and
    - ☐ Deactivate all of the lights.
- ☐ e. The PAF used is 0.25

PART 3 PAF Minimum Requirements

Check all that apply:

CERTIFICATE OF INSTALLATION		NRCI-LTI-05-E
Power Adjustment Factors		(Page 4 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

- ☐ A. The lighting control used to earn the PAF is designed and installed in addition to all manual, and automatic lighting controls otherwise required in 130.1(a) through (e)
  - ☐ EXCEPTION. The lighting control used to earn a PAF has been designed and installed for the sole purpose of compliance with Section 130.1(b)3, and this lighting control is designed and installed in addition to all other manual, and automatic lighting controls otherwise required in Section 130.1.
- ☐ B. Installed wattage has been determined in accordance with Section 130.0(c)
- ☐ C. Space types that qualify for the PAF comply with the definition for that space type in Section 100.1(b)
- ☐ D. Self contained lighting controls used to earn the PAF comply with Section 110.9 and are certified in accordance with the Appliance Efficiency Regulations, as verified on the Title 20 database of certified lighting controls
- ☐ E. A lighting control system is used to earn the PAF, which complies with Section 110.9.
  - ☐ When using a lighting control system to earn a PAF, also submit the Installation Certificate for Energy Management Control System and Lighting Control System
- ☐ F. The controls are permanently installed nonresidential-rated lighting controls. (Portable lighting, portable lighting controls, and residential rated lighting controls shall not qualify for PAFs.)
- ☐ G. The controlled lighting used to earn this PAF is a permanently installed general lighting system.
  - ☐ Furniture mounted luminaires qualify as general lighting system for the purpose of earning this PAF because the general lighting is in an office, and the furniture mounted luminaires comply with all of the following conditions:
    - i. The furniture mounted luminaires have been permanently installed no later than the time of building permit inspection; and
    - ii. The furniture mounted luminaires have been permanently hardwired; and
    - iii. The furniture mounted lighting system has been designed to provide indirect general lighting; and
    - iv. Before multiplying the installed watts of the furniture mounted luminaire by the applicable PAF, 0.3 watts per square foot of the area illuminated by the furniture mounted luminaires has been subtracted from installed watts of the furniture mounted luminaires; and
- ☐ H. At least 50 percent of the light output of the controlled luminaire is within the applicable area listed in TABLE 140.6-A. Luminaires on lighting tracks are within the applicable area in order to qualify for a PAF.
- ☐ I. Only one PAF from TABLE 140.6-A has been used for each qualifying luminaire. PAFs have not been added together unless specifically allowed in TABLE 140.6-A.
- ☐ L. Only lighting wattage directly controlled in accordance with Section 140.6(a)2 has been used to reduce the calculated actual indoor Lighting Power Densities as allowed by Section 140.6(a)2.
  - ☐ Only a portion of the wattage in a luminaire is controlled in accordance Section 140.6(a)2, and only that portion of controlled wattage has been reduced in calculating actual indoor Lighting Power Density.

CERTIFICATE OF INSTALLATION		NRCI-LTI-05-E
Power Adjustment Factors		(Page 5 of 5)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Installation documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	CEA/ HERS Certification Identification (If applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Installation is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation, and attest to the declarations in this statement (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer.
3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations, and the installation conforms to the requirements given on the plans and specifications approved by the enforcement agency.
4. I understand that a HERS rater will check the installation to verify compliance, and that if such checking identifies defects; I am required to take corrective action at my expense. I understand that Energy Commission and HERS Provider representatives will also perform quality assurance checking of installations, including those approved as part of a sample group but not checked by a HERS rater, and if those installations fail to meet the requirements of such quality assurance checking, the required corrective action and additional checking/testing of other installations in that HERS sample group will be performed at my expense.
5. I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met.
6. I will ensure that a completed signed copy of this Certificate of Installation shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone	Date Signed:
Third Party Quality Control Program (TPQCP) Status:	Name of TPQCP (if applicable):	